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NASA Technology Takes Off Into Dark and Stormy Nights

NASA will use an Uninhabited Aerial Vehicle, or "UAV," for a research mission to better understand how lightning forms and dissipates during thunderstorms. The remotely piloted, high-flying aircraft will fly above and around the dangerous disturbances, gauging the various elements that unleash the fury of storms.

Part of NASA's UAV-based science demonstration program, these flights will show the ability of this type of aircraft to carry Earth-viewing scientific payloads into environments where an onboard pilot would be exposed to life-threatening hazards. This capability will benefit both U.S. scientific and commercial objectives well into the new millennium.



The mission will use the ALTUS UAV, built by General Atomics, San Diego, CA, taking advantage of its remotely piloted capability, along with its high altitude (up to 55,000 feet) and slow speed. Researchers from the University of Alabama at Huntsville, with colleagues from NASA's Goddard Space Flight Center will chase down thunderstorms in Florida to better understand the relationship between storms and lightning.

When a developing storm is spotted at NASA's Kennedy Space Center in Florida, researchers will send the ALTUS above and around the storm, while the remote pilots remain safely on the ground.

"This mission combines the exciting use of UAV technology with sound science to unravel the mystery behind lightning and its relationship to violent storms — information that will help those who predict these events as well

as the public and infrastructure affected," said Dr. Ghassem Asrar, Associate Administrator for Earth Sciences at NASA Headquarters.

Using precision instruments aboard the aircraft, researchers will take measurements to determine lightning potential of the storms in the hopes of better understanding how different physical characteristics in the atmosphere can contribute to development of lightning. These data will increase understanding of lightning and storms, while providing federal, state and local governments new disaster-management information for use in the areas of severe storms, floods and wild fires.

This is one of two projects selected from 45 proposals received in response to a solicitation issued in 2000. The solicitation requires that the missions be managed in "Principal Investigator" mode: Each mission's lead investigator is responsible for choosing the UAV best suited for the experiment, and then managing all aspects of the mission for NASA. NASA has identified approximately \$8 million to fund the two UAV missions over a period of four years.

The mission is part of NASA's Earth Science Enterprise, a long-term research effort aimed at understanding how human-induced and natural changes affect our global environment, while providing practical societal benefits to America today.

Scrapyard Documents Available for Review

Materials associated with the Scrapyard Remediation are available for review at the following places.

NASA GSFC WFF
Technical Library
Building E-105
Wallops Island, VA 23337
(757) 824-1065
Monday - Friday, 8 a.m. - 4:30 p.m.

Eastern Shore Public Library
23610 Front Street
Accomac, VA 23301
(757) 787-3400
Monday, Tuesday, Wednesday and
Friday: 9 a.m. - 6 p.m.
Thursday: 9 a.m. - 9 p.m.
Saturday: 9 a.m. - 1 p.m.

Public Meetings Scheduled for Proposed Remedial Action Plan -- Wallops Scrapyard

In accordance with the requirements of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), NASA Goddard Space Flight Center's Wallops Flight Facility (WFF), the United States Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ) invite public comment on the Proposed Remedial Action Plan for the Scrapyard Area Site. The public comment period began on Monday, May 14, and will close on Friday, June 15, 2001.

A public meeting will be held at the NASA Visitor Center auditorium on Wednesday, May 23, at 6:30 p.m. A meeting for employees has been scheduled for 2 p.m., May 23 in Building E-104, Room 210.

The Scrapyard Area is a storage area for scrap metal, empty drums, electrical transformers and used batteries. It is located on approximately 2.4 acres of land adjacent to Building N-222.

Site investigations have been conducted at the Scrapyard since 1989. These investigations revealed several areas of localized contamination from Polychlorinated Biphenyls (PCBs). As a result of the field sampling effort conducted during the limited remedial investigation (RI) soil has been established as the only media of concern. No impacts to surface water and other associated media were determined during the RI. A separate groundwater investigation will be conducted at a later date. NASA does not anticipate that the groundwater has been impacted by the site.

The Proposed Remedial Action Plan identifies the cleanup alternatives for the Scrapyard and describes NASA's, DEQ's and EPA's preferred alternative. The preferred alternative for the Scrapyard Area is the removal and offsite disposal of most of the contaminated soil (approximately 98%) at a solid waste landfill and 2% of the soil at a permitted landfill. The Scrapyard will then be capped with a coarse aggregate cover.

NASA, in consultation with the DEQ and EPA, may modify the preferred alternative or select another remedy presented in the proposed plan based on new information or public comments.

Tips from the Gardner

Super Sized Containers: Large pots can take a lot of soil to fill and weigh a ton once they are full. It is unnecessary to completely fill a container with soil if you are planting shallow-rooted plants. Place styrofoam packing



peanuts in the bottom of the container as filler. It will make the container lighter for easy moving, and save money too.

Save Your Flower Seeds: Save money by harvesting seeds from flowering plants to use for next year. Snip off seed heads when they are ripe and shake them into a brown paper bag. Make seed packets using paper envelopes. Write the name, date and color of the plant onto the envelope. Seeds should be stored in a cool, dark and dry place. Marigolds are especially easy to save.

Tomato Cages: Those cheap wire cages available at garden centres don't do justice to the vine-growing power of a healthy tomato plant. Use a couple of stakes at least 4 feet tall, buy tomato spirals (they are taller and sturdier) or invent your own sturdy trellis for super-size vines.

Tying up Plants: Old nylon stockings (knee-hi's are perfect) cut into strips make wonderful ties for tomatoes or any other vine or plant that needs tying.

Slug Control: Fill up a plastic margarine or yoghurt container with beer (honest) and partially bury it in the soil (with the top of the container level with the soil) near a plant that is being eaten by slugs. The slugs will be attracted to the beer, fall into the container and drown.



Moving Moles Out: Moles generally come calling this month, searching for mates as well as grubs in your lawn. To get rid of the grubs, and send your moles to your next door neighbor, apply milky spore disease. Milky spore is a dust you can buy at your local garden center. Another new product to try is Mole-Med, which has castor oil as its active ingredient. Moles don't like the taste of this any more than you do.

Dandelions: Your neighbors probably wouldn't like dandelions in your yard, but consider this: dandelions make great wine, are a natural diuretic, can be dried and made into coffee, and the kids can braid them into lovely necklaces. You can eat the young leaves in salads. They're an excellent source of potassium, phosphorus, calcium and vitamin A.

Still want to get rid of dandelions? Get a weeding fork and have at it. Dandelions have a two-year life cycle. When they're in the first year and appear as basal foliage, dig them out with a vengeance. It's great exercise. If you miss some and they flower the next year, dig them out before they reach the seed (white puffy) stage. If you let them go to seed and spread their progeny, you'll have to start the process all over again next year.

ISO 9001:2000 Introduction/Awareness June 12, 2001 Bldg. F-3 Conference Room 8:30 a.m. - 4:30 p.m.

The course provides a high-level awareness of the Quality Management Systems Requirements of ISO 9001:2000 and details of the changes brought about as a result of the latest revision to the ISO 9000 requirements.

Anyone desiring a basic understanding of the requirements of ISO 9001:2000 and individuals new to ISO Quality Management Systems should attend.

The course is available to WFF civil servants only on a space-available basis. Fill out a training request and fax or mail to Sherry Kleckner, x1204, by COB June 8. There is no cost for this course. Call Regena Haugh, x1530, with any questions.

Safety Alert Recalls

The Center receives information from the Government/Industry Data Exchange Program (GIDEP) concerning product recalls. In an effort to keep employees informed of recalls that may affect you at work and at home, Code 300 has created a GSFC Safe Alert Web site.

Once a month, information will be provided on product recalls that are received in the Systems Safety and Reliability Office. Read about important product recall information that can affect you and your family. Some recent recalls include:

04/30/01 Kmart Corp. Announces Recall of Martha Stewart Everyday Brand Tea Kettles

04/27/01 Oregon Company Ordered to Stop Selling Chemicals Used To Make Illegal Fireworks

04/25/01 Free Cribs For Local Families Help Emphasize Importance Of Crib Safety

04/24/01 ASICS Tiger Corp. Announces Recall of Wrestling Ear Guards

Full text Safe Alerts are available at: http://ssro.gsfc.nasa.gov/Safety_Alerts/safealert.html



Upcoming Training

Laboratory Safety and Health
Date: June 12-14

Explosive Safety Management and Engineering
Date: June 25-29

Time: 8 a.m. to 4 p.m.
Cafeteria Conference Room

These courses are offered at no cost to NASA and contractor employees. Have signed registration forms to Curtis Oakley, Building E-107, ASAP. For additional info call x2290 or visit: <http://www.wff.nasa.gov/~code803/pdf/syssafw01.pdf>

From FEDweek May 9 Issue

TSP Open Season Reminder

The Thrift Savings Plan open season, starting May 15 and running through July 31, should be of special interest to investors and potential investors.

It allows investors to increase their ongoing withholdings by a percentage point of salary, while choosing whether to join the TSP's two new funds, the international stock (I) fund and the small-capitalization U.S. stock (S) fund—either through allocating ongoing investments or by shifting already invested money from the three other TSP funds. While the two new funds formally became effective May 1, it's likely that most activity involving them won't begin until the TSP open season starts.

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